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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,242	03/28/2007	Friedrich Stockl	STOCKL ET AL-1 PCT	1827
25889	7590	06/09/2009		
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER CHAU, TERRY C	
			ART UNIT 3655	PAPER NUMBER
			MAIL DATE 06/09/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,242	Applicant(s) STOCKL ET AL.	
	Examiner TERRY CHAU	Art Unit 3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/28/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This is the first office action on the merit for application 10/586,242 filed 3/28/2007.

The amendment to the claims filed 3/28/2007 has been entered. Claims 1-4 are pending in the application.

The abstract filed 3/28/2007 has been entered.

The amendment to the specification filed 3/28/2007 has been entered.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 3/28/2007 has been considered by the examiner.

Specification

The disclosure is objected to because of the following informalities:

In line 3 of the Description of Prior Art, on page 1 of the specification, "DE 42 42 271 A1" should read – DE 42 **24** 271 A1 -- so as to correspond with the IDS.

Applicant is advised to review lines 3-6, page 2 of the specification and to correct grammatical errors.

In lines 9-10, page 5, "ring body 16" should be -- ring body 15 --.

In line 12, page 5, "drivers 15" should be --drivers 13--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how the driver ring can be said to be joined to the ring body by "sparing radial gaps" distributed over the circumference in claim 2. It is noted that radial gaps cannot join the driver ring to the ring body. Furthermore, the meaning of sparing is unclear.

Claims 3 and 4 recite the limitation "the gap width" in lines 2 and 4-5, page 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost (US 5,135,087) in view of Schwuger et al. (US 2005/0016307 A1), and Bauer et al. (US 4,267,912).

Regarding claim 1, Frost discloses a synchronization device for a change speed gear (see figure 2), comprising at least one cone clutch (middle cone ring 88) which comprises a double cone ring (friction surfaces 86, 90) which is freely rotatable relative to a hub between an inner friction ring (inner cone ring 76) and an outer synchronizing ring (blocker ring 72) which is axially displaceable relative to the friction ring and which comprises a ring body (body of blocker ring 72) with a stop gearing (blocker ring teeth 104) on the outer circumference and a friction surface (second cone surface 84) on the inner circumference as well as radially inwardly facing drivers (radial flange portion 124) for the [inner] friction ring.

Frost does not disclose that the drivers are provided on a driver ring made of at least one sheet-metal pre-cut part which is joined to the ring body consisting of a sintered body.

Schwuger et al. discloses a multipart synchronizing ring of a synchronization device including a driver ring (annular disk 6) made of at least one sheet-metal pre-cut part (see paragraph 0026) which is joined to the ring body (annular base body 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the outer synchronizing ring of Frost et al. with a multipart synchronizing ring in view of the teachings of Schwuger et al. that a multipart

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synchronizing ring provides for an optimum compromise between function and cost for the production of the individual parts (see paragraph 0017).

Neither Frost nor Schwuger et al. disclose that the ring body is made of a sintered body.

Bauer et al. disclose a synchronizing ring (2) made of a sintered body (see abstract).

It would further have been obvious to one having ordinary skill in the art at the time the invention was made to form the ring body of the synchronization device of Frost as modified by Schwuger et al. from a sintered material in view of the teachings of Bauer et al. that synchronizer rings made from sintered metals are simple to manufacture and have the advantage of lower tooling costs (see lines 32-35, column 1).

Regarding claim 2, Schwuger et al. discloses a synchronization device according to claim 1, wherein the driver ring (6) is joined to the ring body (2).

Regarding 3, Schwuger et al. discloses that the ring body (2) comprises connecting noses (tabs 2A) determining a gap width (a gap width of zero, see figure 2).

Regarding claim 4, Schwuger et al. discloses that a gap width corresponds to a thickness of bonding layer (weld) provided merely in the circumferential sections (see figure 5).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Howard (US 3,678,557) discloses a method for making a gear from two parts including one sintered part and one machined part with radial lubrication channels.

Zenker (US 4,494,638) discloses a synchronizing device with lubricant passages.

Wagner (US 5,657,844) discloses a synchronizing device for a gear shift mechanism.

Schwuger et al. (US 7,134,537) discloses a multipart synchronizing ring of a synchronization device.

Schwuger (US 2004/0,256,190) discloses a clutch body for a gear shifting and synchronizing device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERRY CHAU whose telephone number is (571)270-5926. The examiner can normally be reached on Monday-Friday 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571)272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TERRY CHAU/
Examiner, Art Unit 3655

/Richard M. Lorence/
Primary Examiner, Art Unit 3655

6/5/2009